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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/004,840	12/07/2001	Kazuki Sakata	Q66840	7791

7590

11/30/2005

SUGHRUE, MION, ZINN, MACPEAK & SEAS  
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EXAMINER

THOMPSON, JAMES A

ART UNIT

PAPER NUMBER

2624

DATE MAILED: 11/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/004,840

Applicant(s)

SAKATA ET AL.

Examiner

James A. Thompson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12/7/01, 8/14/03 and 2/3/05.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 12/7/01, 8/14/03, and 2/3/05

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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DETAILED ACTION

*Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

*Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-2 and 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kakinami (US Patent 5,892,855) in view of Suzuki (US Patent 5,034,772).

Regarding claim 1: Kakinami discloses a sensor (figure 1a and column 6, line 63 to column 7, line 4 of Kakinami) in a car window (figure 1b(16b, 26b & 36b; 16d, 26d & 36d) and column 7, lines 5-8 of Kakinami) comprising a hood partitioned in consort with a car window from a vehicle compartment area (as shown in figures 1b and figure 2 of Kakinami); and a sensor main body (figure 1b(16b, 26b & 36b; 16d, 26d & 36d) and column 7, lines 1-8 of Kakinami) that includes a lens (figure 1b and column 6, lines 63-67 of Kakinami) projecting within the hood (figure 2 (hood shown at bottom of figure) and column 7, lines 18-23 of Kakinami) and detects, through the lens, an object to be

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detected that is located in front thereof (column 14, lines 55-62 of Kakinami). The sensor is comprised of television cameras (column 6, lines 63-67 of Kakinami), which inherently include a lens. The physical location of said television cameras (figure 1b(16b, 26b & 36b; 16d, 26d & 36d) of Kakinami) is set within the car such that the lens projects within the hood (figure 2 (hood shown at bottom of figure) and column 7, lines 18-23 of Kakinami).

Kakinami does not disclose expressly that a breathable dustproof filter is provided on a part of the hood.

Suzuki discloses providing a breathable dustproof filter as part of a sensor arrangement (column 3, lines 42-47 of Suzuki).

Kakinami and Suzuki are combinable because they are from similar problem solving areas, namely the protection of electronic sensors. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to provide a breathable dustproof filter as part of a sensor arrangement, as taught by Suzuki. Since the sensor taught by Kakinami projects within the hood, said breathable dustproof filter would be provided on a part of the hood. The motivation for doing so would have been to keep the sensor clean, and thus allow the sensor to function better. Therefore, it would have been obvious to combine Suzuki with Kakinami to obtain the invention as specified in claim 1.

**Further regarding claim 2:** Suzuki discloses that said breathable dustproof filter is used to cover the sensors which are mounted on a printed circuit board (figure 4A(20) and column 3, lines 44-47 of Suzuki). The construction of said filter, specifically the fact that said filter is designed to cover the sensors while only the sensors themselves are mounted on the

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printed circuit board, demonstrates that said filter is detachably installed. Furthermore, it is inherent that a filter would be detachably installed since, if the filter were not detachable, it would be impossible to replace or wash the filter. As is well-known in the art, a filter must be replaced or washed - depending on the type of filter involved - when a certain level of dust and residue has accumulated. This is not possible if the filter is not detachably installed. If one were to fixedly install a filter such that said filter is not detachable, the functionality of said filter would be defeated. In the context of the sensor in a car window taught by Kakinami, said filter would be installed to a part of the hood since the lens of said sensor projects within the hood.

**Regarding claim 5:** Kakinami discloses that the visual field of the lens coincides with the wiping range of a wiper provided on the front surface of the car window (figure 2; figure 3(ARa); and column 8, lines 12-20 of Kakinami).

**Regarding claim 6:** Kakinami discloses that the sensor main body is a camera main body (column 6, lines 63-67 of Kakinami).

4. Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kakinami (US Patent 5,892,855) in view of Suzuki (US Patent 5,034,772) and Fujii (US Patent 5,922,105).

**Regarding claim 3:** Kakinami in view of Suzuki does not disclose expressly that said breathable dustproof filter is a HEPA filter.

Fujii discloses a breathable dustproof filter that is a HEPA filter (column 3, lines 24-26 of Fujii).

Kakinami in view of Suzuki is combinable with Fujii because they are from similar problem solving areas, namely the removal

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of particulate matter from sensitive equipment. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to specifically use a HEPA filter, as taught by Fujii. The motivation for doing so would have been that HEPA filters are both convenient and effective (column 3, lines 24-26 of Fujii). Therefore, it would have been obvious to combine Fujii with Kakinami in view of Suzuki to obtain the invention as specified in claim 3.

Regarding claim 4: Kakinami in view of Suzuki does not disclose expressly that said breathable dustproof filter is an ULPA filter.

Fujii discloses a breathable dustproof filter that is an ULPA filter (column 3, lines 24-26 of Fujii).

Kakinami in view of Suzuki is combinable with Fujii because they are from similar problem solving areas, namely the removal of particulate matter from sensitive equipment. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to specifically use an ULPA filter, as taught by Fujii. The motivation for doing so would have been that ULPA filters are both convenient and effective (column 3, lines 24-26 of Fujii). Therefore, it would have been obvious to combine Fujii with Kakinami in view of Suzuki to obtain the invention as specified in claim 4.

#### *Conclusion*

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Hattori et al., US Patent Application Publication 2005/0196034 A1, Published 08 September 2005, filed 28

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April 2005, divisional of application 09/659,815 filed 11 September 2000.

b. Ertl et al., US Patent 6,834,116 B2, Patented 21 December 2004, filed 23 October 2001, continuation of application PCT/EP00/02961 filed 03 April 2000.

c. Janssen et al., US Patent 6,801,638 B1, Patented 05 October 2004, PCT Publication W000/30056, published 25 May 2000.

d. Nishigaki et al., US Patent 6,683,969 B1, Patented 27 January 2004, filed 10 May 2000.

e. Yuhara et al., US Patent 6,658,137 B1, Patented 02 December 2003, filed 24 March 2000.

f. Keiji Hanawa, US Patent 6,370,261 B1, Patented 09 April 2002, filed 27 January 1999.

g. Mashimo et al., 6,125,191, Patented 26 September 2000, filed 16 May 1996.

h. Shimoura et al., US Patent 5,638,116, Patented 10 June 1997, filed 07 September 1994.

i. Schofield et al., US Patent 5,670,935, Patented 23 September 1997, filed 22 May 1995.

j. Fugitt et al., US Patent 3,780,220, Patented 18 December 1973, filed 14 August 1972.

k. Giuseppe Pino, US Patent 825,241, Patented 03 July 1906, filed 30 August 1902.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Thompson whose telephone number is 571-272-7441. The examiner can normally be reached on 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on 571-272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



16 November 2005

James A. Thompson  
Examiner  
Art Unit 2624



THOMAS O.